

Patent claims

1. A cage (1, 17, 30) for cylindrical rolling-contact elements (8, 9), especially a needle cage, in which at least two rolling-contact elements (8, 9) that are in contact with one another at their lateral surfaces are arranged in series in the circumferential direction in a pocket (7, 23, 39) and each of the two rolling contact elements is guided parallel to a cage axis (1.1, 17.1, 30.1) by webs (6, 22, 33) connecting adjoining side rings (2, 3, 18, 19, 31, 32) to one another, there being stub-shaped webs (15, 29, 40) on the side rings (2, 3, 18, 19, 31, 32) in the center of the pockets (7, 23, 39), between the rolling-contact elements (8, 9), said webs projecting partially into the pocket (7, 23, 39), between the rolling-contact elements (8, 9), wherein the webs (6, 22, 33) comprise sections (10, 11, 28, 38, 14, 24, 25, 34, 35) that extend parallel to the cage axis (1.1, 17.1, 30.1), lie partially inside and partially outside the pitch circle and are connected to one another by sections (12, 13, 26, 27, 36, 37) that extend obliquely to the cage axis (1.1, 17.1, 30.1), the cage (1, 17, 30) being rolled into a round shape from a profiled sheet-metal strip, the ends of which are connected to one another after it has been bent into a round shape, and the stub-shaped webs (15, 29, 40) having no contact with the rolling-contact elements (8, 9) during rotation of the cage (1, 17, 30).

2. The cage (17) as claimed in claim 1, wherein the rolling-contact elements (8, 9) are held on the inside and the outside, a roller ring comprising the cage (17) and the rolling-contact elements (8, 9) thus being formed.

3. The cage (1, 30) as claimed in claim 1, wherein the rolling-contact elements (8, 9) are held by the cage (1, 30) only on the inside or the outside, while an outer (16, 43) or an inner ring is used to retain the rolling-contact elements on the opposite side.

4. The cage (1) as claimed in claim 1, wherein it has a W- or A-shaped configuration, the webs (6) of which are formed, adjoining the side rings (2, 3), by sections (10, 11) that extend in parallel, lie inside the pitch circle and are continued by two sections (12, 13) that extend obliquely to the cage axis (1.1) and combine to form a section (14) that extends in parallel and lies outside the pitch circle, the stub-shaped webs (15) being arranged so as to lie inside the pitch circle.

5. The cage (17) as claimed in claim 1, wherein it has an M- or V-shaped configuration, the webs (22) of which are formed, adjoining the side rings (18, 19), by sections (24, 25) that extend in parallel, lie outside the pitch circle and are continued by two sections (26, 27) that extend obliquely to the cage axis (17.1) and combine to form a section (28) that extends in parallel and lies inside the pitch circle, the stub-shaped webs (29) being arranged so as to lie outside

the pitch circle.

6. The cage (1, 17, 30) as claimed in claim 1, wherein the thickness of the cage material used is less than or equal to 30% of the diameter of the rolling-contact elements (8, 9).

7. The cage (30) as claimed in claim 1, wherein it has an M- or V-shaped configuration, the webs (33) of which are formed, adjoining the side rings (31, 32), by sections (34, 35) that extend in parallel, lie outside the pitch circle and are continued by two sections (36, 37) that extend obliquely to the cage axis (30.1) and combine to form a section (38) that extends in parallel and lies inside the pitch circle, the stub-shaped webs (40) being arranged so as to lie inside the pitch circle and starting from a projection (41, 42) that points radially inward and branches off from the side rings (31, 32).